

6. WHAT IS CLAIMED IS:

1. A method of chemical-mechanical polishing for forming a shallow trench isolation, wherein a substrate having a plurality of active regions, including a large active region and a small active region, is provided, comprising:

5 forming a silicon nitride layer on the substrate;

forming a shallow trench between the active regions;

forming an oxide layer over the substrate, so that the shallow trench is filled therewith;

10 forming a partial reverse active mask on the active region, wherein the partial reverse active mask has a opening to etch the central part of the oxide layer on the active region exposing a partial of the oxide layer;

removing the oxide layer on the central part of the large active region to expose the silicon nitride layer therewithin;

removing the partial reverse active mask; and

15 planarizing the oxide layer until the silicon nitride layer is exposed.

2. The method according to claim 1, wherein the trench is formed by photolithography and etching.

20 3. The method according to claim 1, wherein the oxide layer is formed by high density chemical vapor deposition.

4. The method according to claim 1, wherein the oxide layer on the central

part of the large active region is removed by anisotropic etching.

5. The method according to claim 4, wherein the oxide layer on the central is removed using the silicon nitride layer as a polishing stop layer.

6. The method according to claim 1, wherein the oxide layer is planarized by a chemical-mechanical polishing process.

7. The method according to claim 1, wherein the oxide layer is planarized by a etching back process.

8. The method according to claim 1, wherein the etching process comprises a dry etching process.

9. The method according to claim 1, wherein the etching process comprises a wet etching process.

10. A method of forming a partial reverse active mask employed for forming a shallow trench isolation, comprising:

providing a mask pattern, comprising a large active region pattern with an original dimension and a small active region pattern;

shrinking the large active region pattern and the small active region pattern until the small active region pattern disappears; and

enlarging the large active region pattern to a dimension slightly smaller than the original dimension.

11. The method according to claim 10, wherein the large active region pattern  
5 and the small active region are shrunk with a distance of about  $0.5\mu\text{m}$  to  $2.0\mu\text{m}$ .

12. The method according to claim 10, wherein the large active region pattern  
is enlarged with a distance of about  $0.2\mu\text{m}$  to  $2.0\mu\text{m}$ .

10 13. The method according to claim 10, wherein the large active region pattern  
is enlarged with a dimension smaller than the shrinking distance.